

## CLAIMS

We claim:

1. An e-business service level agreement (SLA) management system for managing the operations of QoS-assured e-business service system comprising:

5 one or more service-level monitors that monitor a quality measure of one or more monitored systems and generate one or more events when the monitored system does not conform to the respective quality measure;

a cross SLA event manager that receives the events and determines which of one or more service (SLA) contracts are affected by the events, the SLA governing the use of one or more of the

10 monitored systems; and

one or more SLA management object (SMO) that tracks the events according to each of the respective SLA contracts.

2. A SLA management system, as in claim 1, where the SMO determines and executes service management actions for every service-level management event received.

15 3. A SLA management system, as in claim 2, where the service management actions include any one or more of the following: installation of a new server, installing computer software,

reconfiguring one or more quality measures, notifying a service personnel, and remove a service from the monitored system.

4. A SLA management system, as in claim 1, where the SMO determines additional required resources.

5 5. A SLA management system, as in claim 5, where the additional required resources are determined by the provider.

6. A SLA management system, as in claim 5, where the additional required resource are determined by the SLA contract.

7. A SLA management system, as in claim 1, where the SMO maps the events to actions.

10 8. A SLA management system, as in claim 1, where the quality measures are changed according to data accessed by the SMO.

9. A SLA management system, as in claim 1, where the quality measures change.

10. A SLA management system, as in claim 1, where the events include a SLA specified event.

11. A SLA management system, as in claim 10, where the SLA specified events include any one or more of the following: monitored system available, monitored system transaction response time, monitored system service time, monitored system problem resolution response time, network connection bandwidth, and capacity on demand latency.
- 5 12. A SLA management system, as in claim 1, where the events are a provider determined service level management monitoring events.
13. A SLA management system, as in claim 1, where the service level management monitoring events include any one or more of the following: monitored system available, monitored system transaction response time, monitored system service time, monitored system problem resolution response time, network connection bandwidth, capacity on demand latency, a monitored system trend of one or more of the quality measures.
- 10 14. A SLA management system, as in claim 1, where the quality measure includes any one or more of the following: monitored system available, monitored system transaction response time, monitored system service time, monitored system problem resolution response time, network connection bandwidth, capacity on demand latency, a monitored system trend of one or more of the quality measures.
- 15 15. A SLA management system, as in claim 1, further comprising:

a cross-SLA resource manager that determines how to provide one or more service management resources to meet one or more SMO resource requests.

16. A SLA management system, as in claim 15, where the service management resources include any one or more of the following: one or more service personnel, one or more computing resources, one or more computer programs, and one or more computer hardware components.
17. A SLA management system, as in claim 15, where the SLA cross resource manager determination is based on one or more of the following: the provider's SLA management objective for a set of the established SLA contracts, a business assessment value of each resource allocation request calculated by one or more SMOs, and a business assessment value of each resource allocation request calculated by the cross-SLA resource manager.
18. A SLA management system, as in claim 15, further comprising an SMO manager that manages the life cycle of one or more of the SMOs.
19. A SLA management system, as in claim 18, where the SMO management includes any one or more of the following: initialization of SMO, linking SMOs to one or more other system components, deleting SMOs, creating SMOs, modifying SMOs, and integrating and managing service system acceptance - testing - time and the production - time activities of the SMOs.
20. A SLA management method comprising the steps of:

monitoring a quality measure of one or more monitored systems and generate one or more events when the monitored system does not conform to the respective quality measure;

receiving the events and determines which of one or more service (SLA) contracts are affected by the events, the SLA governing the use of one or more of the monitored systems; and

5 tracking the events according to each of the respective SLA contracts.

21. A computer program product having a program with the steps of:

monitoring a quality measure of one or more monitored systems and generate one or more events when the monitored system does not conform to the respective quality measure;

receiving the events and determines which of one or more service (SLA) contracts are affected by

10 the events, the SLA governing the use of one or more of the monitored systems; and

tracking the events according to each of the respective SLA contracts.

22. An e-business service level agreement (SLA) management system for managing the operations of QoS-assured e-business service systems comprising:

means for monitoring a quality measure of one or more monitored systems and generate one or

15 more events when the monitored system does not conform to the respective quality measure;

means for receiving the events and determines which of one or more service (SLA) contracts are affected by the events, the SLA governing the use of one or more of the monitored systems; and

means for tracking the events according to each of the respective SLA contracts.